

US010077084B2

# (12) United States Patent

#### Milton et al.

# (54) SYSTEMS, METHODS, AND DEVICES FOR AN AUTOMOBILE DOOR OR WINDOW

(71) Applicant: **Bluegentech LLC**, Salt Lake City, UT

(72) Inventors: **Trevor R. Milton**, Salt Lake City, UT (US); **Steve Jennes**, Fullerton, CA

(US); Markus Scholten, Irvine, CA

(73) Assignee: **Nikola Corporation**, Salt Lake City, UT (US)

(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: 15/396,209

(22) Filed: Dec. 30, 2016

(65) **Prior Publication Data** 

US 2017/0240219 A1 Aug. 24, 2017

## Related U.S. Application Data

(63) Continuation-in-part of application No. 15/357,350, filed on Nov. 21, 2016.

(Continued)

(51)	Int. Cl.	
	B62D 33/06	(2006.01)
	B60J 5/06	(2006.01)
	B60N 3/10	(2006.01)
	B60N 3/16	(2006.01)
	B60N 3/00	(2006.01)
	B60K 6/26	(2007.10)
		(Continued)

(52) U.S. Cl.

CPC ....... **B62D 33/0612** (2013.01); **B60J 5/0497** (2013.01); **B60J 5/062** (2013.01); **B60K 6/20** (2013.01); **B60N 3/001** 

# (10) Patent No.: US 10,077,084 B2

(45) **Date of Patent: Sep. 18, 2018** 

(2013.01); B60N 3/008 (2013.01); B60N 3/10 (2013.01); B60N 3/16 (2013.01); B60R 3/00 (2013.01); E05D 15/0604 (2013.01); E05F 15/41 (2015.01); E05F 15/60 (2015.01); E05F 15/632 (2015.01); E05F 15/70 (2015.01); E05F 15/73 (2015.01); B60K 6/28 (2013.01); B60L 11/1874 (2013.01); E05Y 2900/516 (2013.01); Y10S 903/906 (2013.01); Y10S 903/907 (2013.01)

#### (58) Field of Classification Search

CPC ..... B62D 33/0612; B62D 33/06; B60J 5/0497 See application file for complete search history.

# (56) References Cited

#### U.S. PATENT DOCUMENTS

4,301,570 A 11/1981 Thomas 4,351,554 A \* 9/1982 Miller ...... B62D 33/0612 180/89.14 (Continued)

Primary Examiner — Brian L Swenson (74) Attorney, Agent, or Firm — Terrence J. Edwards; TechLaw Ventures, PLLC

# (57) ABSTRACT

Systems, methods, and devices for a vehicle door or window are disclosed herein. A vehicle includes a vehicle body and a cabin located within the body of the vehicle, wherein the cabin includes an interior that is configured to accommodate at least one person. The vehicle includes at least one seat located in the interior of the cabin that is configured for seating a user. The vehicle includes at least one door that provides ingress and egress to the interior of the cabin of the vehicle, and the at least one door is located with respect to the body such that the door opens to provide ingress and egress into the cabin from a backside of the seat.

## 26 Claims, 9 Drawing Sheets

